## **Shell Oil Products US**



April 8, 2010

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Director, Air Enforcement Division
Office of Regulatory Enforcement
U.S. Environmental Protection Agency, Mail Code 2242-A
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460-0001

Subject:

United States v Equilon Enterprises, LLC

Civil Action Number H-01-0978

Southern District of Texas entered August 21, 2001

Flaring Incident Report – April 2, 2010

Shell Oil Products US, Puget Sound Refinery

## Dear Sir or Madam:

Pursuant to Section VIII, Paragraph 136 of the consent decree in *United States v Equilon Enterprises LLC*, Civil Action Number H-01-0978, entered August 21, 2001 by the United States District Court for the Southern District of Texas, Shell Oil Products US submits the following information regarding a Hydrocarbon Flaring Incident, as defined in Paragraph 120(f), that occurred at the Puget Sound Refinery. The flaring incident was investigated and a detailed report listing the root causes is included in the attached Flaring Incident Report.

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and that I have made a diligent inquiry of those individuals immediately responsible for obtaining the information and that to the best of my knowledge and belief, the information submitted herewith is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

If you have any comments or questions regarding this information, please contact Tim Figgie at (360) 293-1525.

Sincerely,

Susan G. Krienen General Manager

**Enclosure** 

## cc (w/enclosures):

Director, Air Enforcement Division U.S. Environmental Protection Agency c/o Matrix Environmental & Geotechnical Services 120 Eagle Rock Avenue, Suite 207 East Hanover, NJ 07936

Director NWCAA 1600 South 2nd Street Mount Vernon, WA 98273

John Keenan Office of Air Quality (OAQ-107) US EPA – Region 10 1200 Sixth Avenue Seattle, WA 98101

FLARING INCIDENT REPORT					
Type of Incident: A	cid Gas / SWSG	🔀 Tail Gas	⊠ Hydı	rocarbon	
<b>Brief Description of In</b>					
		a power blip occurred that			
incident and a tail gas tre	Tall Gas Treating C Pating Unit Incident	Init (TGTU1). This resulte . The power blip occurred	d in a nyuro due to a hid	ah windstorm	
that hit the area and, acc	ording to the Puge	t Sound Energy power con	npany, resu	Ited in a tree	
or branch hitting a power	line. When the SF	RU3 tripped all amine acid	gas (AAG) v	was routed to	
SRU4. Upsets across the	refinery affected t	he quality of the acid gas.	inis, along incinerator	, with the	
quick switch to SRU4 upset the unit, resulting in high SO2 in the SRU4 incinerator stack. At approximately 7:45 PM all AAG was routed to SRU3, which is better suited for processing acid					
gas at lower rates, and SRU4 was shutdown for a planned turnaround. Emissions from the					
SRU4 shutdown are included in the estimates below. AAG was not flared during this event. All process units were stabilized by approximately 5 AM on April 3. The 250-ppm SO2 12-hour					
average limit on the SRU3 and SRU4 was exceeded and the 1000-ppm SO2 corrected to 7%					
O2 1-hour average limit was exceeded on the flare (one, 1-hr avg) and on SRU4 (five, 1-hour					
avgs).					
AOP Permit Terms: 4.11;	5.8.15				
Incident Start Date:	4/2/10	Incident Start Time:	1:15 pm		
Incident End Date:	4/3/10	Incident End Time:	5:00 am		
The transfer of the transfer o	<u> </u>		<u> </u>		
Estimated Sulfur Dioxide Emissions:		SRU3&4 SO2: 1,112	Pounds		
(Attach below):		Flare SO2: 2,080			
SO2 lbs/hr = 0.995*(flare gas flow, MSCFH		* 1000) * (Sulfur, vol% /	100) *		
	(64.0648/379), where 0.995 is flare efficiency, 64 #/#-mole is the MW of SO2				
and 379 is scf/#-mole	· · · · · · · · · · · · · · · · · · ·				
Stone token to limit the	duration and/or	quantity of sulfur diaxi	ide emissin	ne.	
Steps taken to limit the duration and/or quantity of sulfur dioxide emissions:  The flare gas recovery unit was operating to recover as much material as possible during this event					
and all amine acid gas fee					
ANALYSIS OF INCID		RECTIVE ACTIONS			
No additional information attached					
Primary and contributing causes of incident:  The root cause of this event was a power blip that occurred due to a high windstorm that hit the area					
and according to the Pug	ent was a power bil let Sound Energy n	ip that occurred due to a r lower company, resulted it	ngn windsto n a tree or b	rm that filt the area	
and, according to the Puget Sound Energy power company, resulted in a tree or branch hitting a power line.					
Analyses of measures av					
operational, and maintenance changes; discuss alternatives, probable effectiveness, and					
cost; determine if an ou	tside consultant	should be retained to as	ssist with a	nalyses):	
See below.					
Description of correctiv	e action to be tal	zan (inaluda aammanaa	mant and c	nompletion dates).	
See below.	e action to be tal	ten (menute commence)	memi anu c	ompiction dates).	
LOCC DCIOYY.					
If correction not require	ed, explain basis	for conclusion:			
		of Puget Sound Refinery's	control and	no corrective	
action can be done.					

The incident was the result of or resulted in the following (check all that apply):
Error from careless operation  Equipment failure due to failure to operate and maintain in accordance with good
engineering practice
Sulfur dioxide emissions greater than 20 #/hr continuously for three or more
consecutive hours
Caused the number of Acid Gas or Tail Gas incidents in a rolling twelve-month
period to exceed five
None of the above
Was the root cause identified as a process problem isolated within an SRP?
Yes (An optimization study of the affected SRP is required as part of the corrective
actions identified above.)
igotimes No
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The root cause of the incident was:  Identified for the first time since March 21, 2001
Identified as a recurrence since March 21, 2001 (explain previous incident(s) below)
Other power interruptions have occurred that are beyond PSR's control.
Was the root cause of the incident a malfunction?
Yes (describe below) No
See description above
Definition of Malfunction: Any sudden, infrequent, and not reasonably preventable
failure of air pollution control equipment, process equipment, or failure of a process to
operate in a normal or usual manner. Failures that are caused in part by poor
maintenance or careless operation are not malfunctions.
REPORTING REQUIREMENTS Submit initial report, supporting documents and assessment of stipulated penalties, if any,
within 30 days of the incident to the EPA Regional Office and Northwest Clean Air Agency.
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If at the time the first report is submitted (within 30 days of
the incident), corrective actions have not been determined a
follow-up report is required within 45 days of first report
(unless otherwise approved by the EPA). Provide anticipated date of follow-up report.
uate of tonow-up report.
Prepared By:Tim Figgie Date:April 6, 2010